COMMUNICABLE DISEASES & NUISANCE CONDITIONS

STATEMENT OF PURPOSE:

School personnel are required to report diseases of public health importance to the Vermont Department of Health.

AUTHORIZATION/LEGAL REFERENCE:

- 18 V.S.A. Chapter 21 – Communicable diseases
- Vermont School Quality Standards, Section 2120.8.1.3.3

DEFINITION:

Communicable disease - An infectious or contagious disease that can be transmitted from one person to another by direct physical contact, infected airborne droplets, etc.

Nuisance condition - Nuisance-type conditions include: Pediculosis (lice), Scabies and Ringworm.

Reportable disease – List of communicable disease defined by VDH that are required to be reported.

REQUIRED SCHOOL NURSE/ASSOCIATE SCHOOL NURSE ROLE:

Call VDH Reporting Line 1-888-588-7781, within 24 hours when you have reason to believe a student is sick or has died of a suspected reportable disease; identify the name and address of the student and the name and address of student's medical home. (See attached list of reportable diseases.)

SUGGESTED SCHOOL NURSE/ASSOCIATE SCHOOL NURSE ROLES:

1. Be knowledgeable about current communicable disease regulations and control, current reportable diseases, and nuisance conditions. Maintain contact with local Vermont Department of Health.
2. Be knowledgeable about school policies and procedures related to communicable disease/nuisance condition prevention.
3. Act as a resource in the writing of school policies and procedures.
4. Refer to medical home for diagnosis. Exclude and readmit students suspected or demonstrated to have a communicable disease/nuisance conditions according to local school policies and procedures.
5. Collaborate with health care providers on limitations for the child upon return to school.
6. Promote prevention and control through in-service and serve as a resource person to staff.

7. Provide health counseling to parents and guardians regarding appropriate treatment and follow-up.
8. Notify school administrators in the event of a communicable disease/nuisance conditions outbreak and follow guidelines established by the Vermont Department of Health regarding information and protocols.
9. Document appropriate information in the student's record.

SUGGESTED SCHOOL NURSE ROLES:

1. Promote prevention and control through health education.
2. Develop and write policies in collaboration for school administration.

RESOURCES:

- Red Book: Report of the Committee on Infectious Diseases. (25th ed.). (2003). Elk Grove Village, IL: American Academy of Pediatrics.
- Vermont Department of Health School Liaisons
- Vermont Department of Health, Division of Epidemiology - http://www.healthyvermonters.info/hs/epi/idepi/reportable/reportable.shtml

SAMPLE POLICIES, PROCEDURES, AND FORMS:

- Vermont Department of Health Reportable Diseases
- Vermont Department of Health Head Lice Recommendations

Vermont Department of Health
Reportable Diseases

Health Surveillance Division

Updated 03/15/2004

REPORTABLE: Any unexpected pattern of cases, suspected cases, deaths or increased incidence of any other illness of major public health concern, because of the severity of illness or potential for epidemic spread, which may indicate a newly recognized infectious agent, an outbreak, epidemic, related public health hazard or act of bioterrorism.

AIDS
Amebiasis
Arboviral illness
Babesiosis
Campylobacter infection
Chlamydia trachomatis infection
Cholera
Creutzfeldt-Jakob disease/transmissible spongiform encephalopathies
Cryptosporidiosis
Diphtheria
Ehrlichiosis
Encephalitis
Enterococcal disease, vancomycin–resistant
Enterohemorrhagic *E.coli*, (including O157:H7)
Giardiasis
Gonorrhea
Guillain Barre syndrome
Haemophilus influenzae disease, invasive
Hantavirus disease
Hemolytic uremic syndrome (HUS)
Hepatitis A
Hepatitis B
Hepatitis B, positive surface antigen in a pregnant woman
Hepatitis C
Hepatitis, unspecified
Human immunodeficiency virus (HIV)*
*By Unique Identifier Code
Influenza
Lead poisoning
Legionellosis
Listeriosis
Lyme disease
Malaria
Measles (Rubeola)
Meningitis, bacterial
Meningococcal disease
Mumps
Pertussis (whooping cough)
Plague
Poliomyelitis
Psittacosis
Rabies, human and animal cases
Reye syndrome
Rheumatic fever
Rocky Mountain spotted fever
Rubella (German measles)
Rubella, congenital rubella syndrome
Salmonellosis
Severe Acute Respiratory Syndrome (SARS)
Shigellosis
Streptococcus, Group A invasive
Streptococcus, Group B invasive (infants less than one month of age)
Streptococcus pneumoniae disease, invasive
Syphilis
Tetanus
Toxic shock syndrome
Trichinosis
Tuberculosis
Typhoid fever
Varicella: (Chicken pox only)
- Persons 18 years of age or younger: aggregate weekly reporting OR individual case reporting
- Persons 19 years of age or older: individual case reporting

VRSA (vancomycin-resistant *Staphylococcus aureus*)/VISA (reduced susceptibility)
Vibrio species
Yellow fever
Yersinia enterocolitica

Diseases which are possible indicators of bioterrorism:

Anthrax	Brucellosis	Tularemia
Botulism	Smallpox	Viral hemorrhagic fever

Treatment: Human rabies postexposure treatment (HRPET) is reportable even where no evidence of rabies has been found.

Reporting of Diseases

The law requires that health care providers report diseases of public health importance. Persons who are required to report: health care facilities, health care providers, health maintenance organizations, hospital administrators, laboratory directors, managed care organizations, nurse practitioners, nurses, physician assistants, physicians, school health officials, town health officers. Cases of reportable diseases should be reported to the Division within 24 hours.

24 Hour Telephone Reporting Line (802)951-4080 or 1-888-588-7781
Consultation and Inquiries 802-863-7240 (7:45AM – 4:30PM M-F) or 1-800-640-4374 (VT only)
Emergency Consultation after normal business hours also available at numbers above

VERMONT DEPARTMENT OF HEALTH - Division of Community Public Health
1/31/05
RECOMMENDATIONS ON THE MANAGEMENT OF HEAD LICE
(PEDICULOSIS CAPITIS)

I. General Information on Head Lice

A. Identification

Head lice (pediculosis capitis) are small wingless, crawling insects 2 to 3mm, about the size of a sesame seed that live on human scalp and hair as parasites. Adult lice live 6–27 days, laying about 10 eggs (nits) per day. These tiny eggs are firmly attached to the hair shaft close to the scalp with a glue like substance produced by the louse. Under optimum conditions (88^{o} F), the eggs hatch in 10-14 days. The nymph grows for about 9-12 days, mate and the female lays eggs. Infestation by head lice occurs on the hair, eyebrows, and eyelashes. Infestations can result in severe itching, caused by the lice saliva, which in turn may lead to secondary infections. Head lice derive nutrients by bloodfeeding once or more often each day. They cannot survive for more than a day or so at room temperature without ready access to a person's blood. Light infestations (1–5 adult lice) may result in no symptoms. In at least 50% of infestations, no symptoms will be evident. Since adult lice tend to lay eggs close to the scalp, the duration of the infestation can often be estimated by the distance of the nit from the scalp. (1, 2, 4, 9, 10, 12)

Identification of the eggs, nymphs, and lice with the naked eye is possible, but is easiest with a hand lens and good light. Lice and their eggs are most often found at the nap of the neck and behind the ears. Diagnosis is usually made by identification of the nits which are tiny oval shaped opaque shells cemented to the hair shaft. They are difficult to dislodge and can be distinguished from hair casts or dandruff by their regular oval shape. Hatched eggs are snow white and conspicuous. Unhatched eggs are more difficult to see and may be tan or coffee colored. The lice themselves are less easily seen because they are tiny, fewer in number, and crawl rapidly away from light. (1, 2, 6, 7)

B. Etiology:

Three species of lice infest humans: *Pediculus humanus capitis*, the head louse; *Pediculus humanus corpiris*, the body louse; and *Phthirus pubis*, the pubic or crab louse. Lice are host specific and those of lower animals (including pets) do not infest people. Head lice do not transmit any disease agents. The body louse has been involved in outbreaks of epidemic typhus, trench fever, and louse borne relapsing fever. (2, 3, 8)

In the U.S., infestations are less common in blacks than in individuals of other races. Children aged 3 to 12 years are more frequently infested than adults. All socioeconomic (12) groups are affected. Head lice are not able to fly or jump and they are unlikely to wander far from their preferred habitat. Lice and their eggs are unable to burrow into the scalp. Hair length does not influence infestation and having head lice is not a reflection of poor hygiene. Head lice infestation is not a major health hazard. It is, however, a nuisance which can often result in hardship for those involved including embarrassment, anxiety, physical discomfort and the expense of treatment, particularly when the entire household is affected. The greatest harm associated with head lice results from well intentioned but misguided use of caustic or toxic substances to eliminate the lice. (7, 11)

C. Incubation Period:

The life cycle is composed of three states: eggs, nymphs, and adults. Under optimal conditions, the eggs hatch in 10-14 days. The nymph stage lasts 9-12 days. The egg-to-egg cycle averages three weeks. Lice can be spread from person-to-person as long as lice remain alive on an infested person. Unhatched eggs cannot be spread from person-to-person until they hatch. [2, 4, 6, 7, 15]

D. Modes of Transmission:

1. Transmission occurs by direct contact with hair of infested individuals.
2. Head lice cannot jump or fly.
3. Lice can move very rapidly from one head to another when physical contact is made.
4. Shared objects such as hats or combs are possible modes of transmission, as are shared carpeting and bedding.
5. Household pets do not transmit lice.[2, 3, 6]
6. Head lice can survive less than 1day away from the host under normal conditions.[12]

II. Treatment Recommendations

A. Pediculicide Treatment

1. Consult the primary care provider before applying lice treatment pesticides. This is especially important with some products if the individual is pregnant, breastfeeding, an infant, has allergies, asthma, or the lice or nits are in the eyebrows or eyelashes.
2. Check all family members for lice and nits. Only those persons infested should be treated.
3. Effective treatment involves the use of one of several pediculicides as a shampoo. Some pediculicides are available only by prescription; others are available over-the-counter.
4. No studies are presently available to substantiate the reliability of remedies such as herbal rinses, Vaseline and mayonnaise. Families should contact their family health care provider for advice on these forms of remedies.

B. Non-Prescription (Over the Counter) Treatment Recommendations

Name Brand Names	NIX**	RID; A-200; R+C; Pronto
Generic	1% Permethrin	Pyrethins
Application time	10 minutes (to dry hair)	10 minutes (after shampooing)
% Ovicidal	70–80%	70 - 80%
Beneficial Residual Activity	Yes	No
Adverse Properties	None	Possible allergic reaction if sensitive to ragweed
Resistance Reported	Yes	Yes

**Currently the recommended treatment of choice for head lice. [12, 5]

- All pediculicides are pesticides and must be used with caution.
- No product is 100% effective against lice.
- **Retreatment**: It is recommended that each infested person be retreated 7 to 10 days after the first treatment. Any eggs which survived the first treatment will have hatched by 10-14 days and will be killed by the second treatment before they are mature enough to lay more eggs.[3,7,12]

C. Prescription Treatments

Prescription treatment may be recommended when live lice are found after correct use of an over the counter product.

1. **Malathion (Ovide)**

Malathion (Ovide), available by prescription, is a highly ovicidal lotion applied to the hair and left on for 8-12 hours before washing out. The major concerns are the high alcohol content, making it highly flammable, and the risk of severe respiratory depression if accidentally ingested. It also has an extremely disagreeable odor. Because of potential morbidity and even mortality possible with treatment, the risks and benefits must be carefully considered. It must be used with extreme caution and only in those cases where resistance to other products is strongly suspected. [12, 13]

2. **Lindane (Kwell)**

The Vermont Department of Health does not recommend the use of Lindane (formerly sold under the brand name Kwell). Lindane is available by prescription only. It should be used with extreme caution, if ever. It has the highest potential for toxic effects of all pediculicides, including central nervous system toxicity and seizures. [6, 7, 12, 16] Lindane is contraindicated in premature infants and in individuals with known seizure disorders. It should be used with extreme caution in children under 2 years of age, people with open or traumatized skin, and in pregnant or lactating women. Although it has low ovicidal activity, it may be indicated for people who have not responded or are intolerant of safer therapies.

Carefully follow the directions provided by the manufacturer when using these products

D. Manual Removal

"Manual removal of nits after treatment with a pediculicide is not necessary because only live lice cause an infestation. Individuals may want to remove nits for aesthetic reasons or to decrease diagnostic confusion however, because none of the pediculicides are 100% effective, manual removal of nits (especially the ones within 1cm of the scalp) after treatment is recommended by some."[12] The following tips can add to successful removal:

- Work in natural or bright light, (a magnifying glass may be helpful).
- Use a nit-removal comb or your fingernails.
- Section hair, with special focus around ears and nape of neck.
- For children, plan to work in short periods and use a distraction such as music, a favorite show, or hand held toy.
- Check the head daily for 7 to 10 days after infestation
- A vinegar rinse can help to loosen nits. However, vinegar neutralizes the effectiveness of many pediculicides. Do not use a vinegar rinse after treatment and do not clean nit combs in vinegar.
- Successful vinegar rinse: use regular shampoo, rinse with vinegar, and then rinse out vinegar thoroughly **before** applying a pediculicide.
- Commercial products are advertised to dissolve the eggs or the cement by which the eggs are attached to the hair. To date, the effectiveness or safety of these products has not been determined. [10]

E. Other Control Measures:

1. Lice can survive only up to 48 hours off the scalp[7]
2. All household members should be checked for head lice and only those with lice or nits within 1cm of the scalp or share a bed with the person infected should be treated.[13]
3. Spraying with pesticides is not recommended.
4. Clothing, bed linens, combs, brushes should be treated by washing in hot water (over 130°F for 20 minutes).[16]

5. Articles that cannot be laundered and have been in contact with the head of the person with the infestation 24-48 hours before treatment can be vacuumed or bagged and isolated for 10 days or dry cleaned.
6. Freezing articles for 72^{o} can kill lice and eggs.[11]

III. Possible Resistant Head Lice

Parents and health professionals nationwide have reported treatment failures. [10] To date, national and Vermont entomologists suggest that the possibility of resistant lice needs to be studied further. They do indicate that when lice are exposed repeatedly to the same pediculicides, resistance could develop. No pediculicide is 100 % effective; thus, what may appear as resistant lice could be attributed to treatment failure. [1, 4, 8] Misdiagnosis, misuse, and noncompliance with follow-up treatment are typical problems. [13]

When treatment failure is suspected the family should contact their health care provider for further advice. A prescription treatment may be recommended.

IV. Prevention Measures

It is probably impossible to totally prevent head lice. It is recommended for children to be taught not to share combs, brushes and hats. Prompt treatment can minimize the spread to others.

One of the most important tactics for controlling the spread of lice is in developing a prevention plan for the family, institutional setting, and community. Routine classroom or school-aide screening has not been shown to be an effective practice. [12] Public Health staff can be most effective by facilitating the development of a system-wide approach to controlling the communicable infestation of pediculosis capitis. An effective system approach to prevention of the spread of head lice needs to include the following:

A. **Identification of the at risk population** All socioeconomic groups are affected. Children in childcare and school age children are the most commonly affected by infestations.

B. **Identification of partners** Identify partners who can be important in a collaborative effort to educate, identify and control head lice infestations. The following are partners who should be considered: parents and children, school nurses and other school personnel, child care providers, primary care providers, town health officers, public health staff, community health clinics, community volunteers, civic groups, local media, business persons (e.g. drycleaners, Laundromats, pharmacies).

C. **Provide accurate and current information** Educate on etiology of lice, mode of transmission, treatment, control measures and other resources. Have all partners consider opportunities to educate such as health fairs, school open houses, staff training days.

D. Facilitate the development of a collaborative plan for prevention of head lice and management of head lice outbreaks Develop with individual institutions (e.g. childcare centers, schools) specific prevention measures that include the following:

1. Provide general information on identification of head lice during the first few weeks of each new school year, immediately following school breaks, or at least four times each year
2. Assign individual hooks/lockers in the school
3. Keep hats in coat sleeves
4. Permanently assign resting mats, towels or pillows and keep separate while in use or storage
5. Don't allow sharing of combs, brushes or hair ribbons
6. Limit home to school transporting of personal toys such as stuffed toys.
7. Assist schools and childcare facilities in setting a plan of action if head lice infestation occurs in more than 3 different students in the same class room or when 10% of the students in a classroom have evidence of infestation. (Refer to section on managing pediculosis humanus capitis infestation outbreak).
8. Send general fact sheet home at the beginning of the school year and at other key times (i.e. before school breaks). Send general fact sheet notification of outbreak (more than 3 students in a classroom or 10% of class) home with all students. Engage help of all parents to check for head lice weekly (sending home a fact sheet and notification every time one student in class has lice may become counterproductive and may tend to be ignored after awhile by parents. However, this may be an individual decision made by the school nurse to best suit the unique needs of each school).

V. Managing Head Lice Outbreaks

A. General Information

1. When a child is found to have head lice all household contacts and other children who were most likely to have direct head-to-head contact with the child should be checked.[12]
2. Those with live lice or nits within 1cm (1/2 inch) of the scalp should be treated
3. Parents should contact their primary care provider for recommended treatment.
4. Routine screening for lice has not been proven to have a significant effect on the incidence of head lice in schools.
5. Provide information to parents periodically on the diagnosis, treatment and prevention of head lice.
6. Due to the economic impact of head lice, treatment can be a hardship for families. Therefore, institutions may consider purchasing over the counter pediculicides in bulk to resell or providing it free for families in need.
7. Encourage parents to notify the school, childcare provider, and other close personal contacts when head lice have been identified.
8. Volunteers identified in advance can be helpful in the success of managing daily head checks.

B. Management of the Day of Diagnosis

1. A child with an active head lice infestation poses little risk to others; therefore, the child should remain in class until the end of the school day, but be discouraged from close direct contact with others.[12]
2. Confidentially must be maintained so the child is not embarrassed.
3. Notify the child's parent by phone on the day that head lice are found or send home a note with the child at the end of the school day informing the parent(s) of the biology of head lice and methods to eliminate infestations and stating that prompt, proper treatment must be done before the child returns to school.
4. After treatment with a pediculicide (such as Nix or RID), removal of nits (more than 1cm away from the scalp) is not necessary to prevent spread because only live lice cause an infestation.

5. However, removal of nits may decrease diagnostic confusion, and the possibility of unnecessary treatment.
6. Consider sending a note out to parents of all children in the classroom, encouraging that children be checked at home and treated if appropriate before returning to school the next day.

C. Criteria for Return to School

1. A child should be allowed to return to school after proper treatment.
2. A second application of a pediculicide may be needed 7 to 10 days after the first treatment. The parent(s) should notify their primary care provider for advice about prescription medications for recurrent infestations.
3. A child should not be prevented from returning to school because of the presence of nits.
   - "No Nit" policies requiring that children be free of nits before they return to childcare or school have not been effective in controlling head lice transmission and are not encouraged.[7]
   - "No Nit" policies disrupt the education process and should not be an essential strategy in management of head lice.[12]
   - The American Academy of Pediatricians and the National Association of School Nurses discourage "no nit" policies for return to school.[12, 14]
4. The school nurse should be available to re-check the child if requested by the parent and in cases of recurrent infestation.

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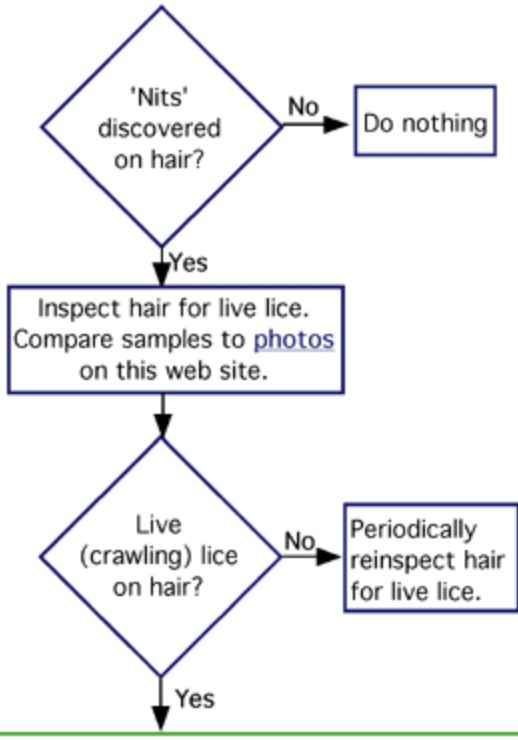
Scheme for managing presumed head louse infestations in schools



RECOMMENDED RESPONSES ✓

Notify parent/guardian at the end of the day of the suspected infestation.
Provide information on the biology of head lice and methods to eliminate infestations.

UNJUSTIFIED RESPONSES ✗

Exclusion or quarantine.
Notification of classmates' parents.
Mass screenings.
Insecticide treatments to school environment.
Reporting case to youth/social services.
Bagging of clothes.
Restricted use of headphones or athletic gear (helmets).

Scheme for managing presumed head louse infestations